

A white egret is captured in mid-flight, its long neck curved forward and its wings fully extended. The bird is positioned on the left side of the frame, facing right. The background is a lush, green marsh with tall grasses and some yellow flowers, slightly out of focus. The overall scene is bright and natural.

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Governing Board Workshop September 9, 2009 Phase I Planning and Next Steps

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Stakeholder Input During Phase I

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- General agreement regarding overarching goals
- Differences of opinion regarding-
 - Everglades target and need for dry season carryover storage
 - Managed versus natural features
 - Spatial extent versus minimizing footprint/economic impacts
 - Significance of evapotranspiration
 - Cost considerations
 - Recreational considerations
- 9 proposed stakeholder configurations
 - Varying emphasis- performance, costs, recreation, land needs

Evaluation of Stakeholder Configurations

RESTORATION PLANNING

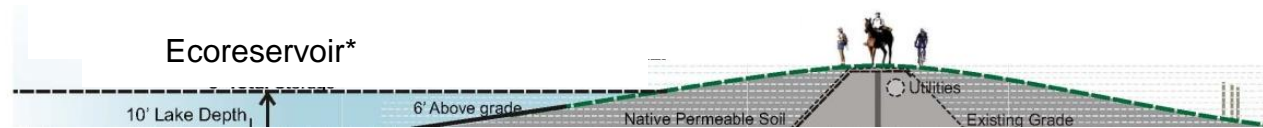
- Performance
 - Similar performance for Northern Estuaries, Lake Okeechobee, and water supply (Lake Okeechobee Service Area)
 - Varying performance for Everglades and water quality
- Costs
 - Highly variable costs across configurations
 - Total costs ranging from \$5.3-31.3 billion
 - River of Grass costs ranging from \$747 million-11.8 billion
- Performance and Cost Relationships
 - Non-linear
 - Performance not strictly tied to costs or total storage volume
 - Performance highly dependent on feature type and operations

Approaches for Storage, Treatment and Delivery

Proposed Features

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- Reservoir
- Shallow Impoundment
- Reservoir within Lake Okeechobee
- Dispersed Storage
- Flowway
- Ecoreservoir
- Ecoslough
- Wetlands Management Area
- Stormwater Treatment Area



* Landform in lieu of typical levee

Phase I Comparative Evaluation Summary of Combined Project Features

Deep Storage Reservoir With STAs

Everglades Restoration

High

EAA Wetlands

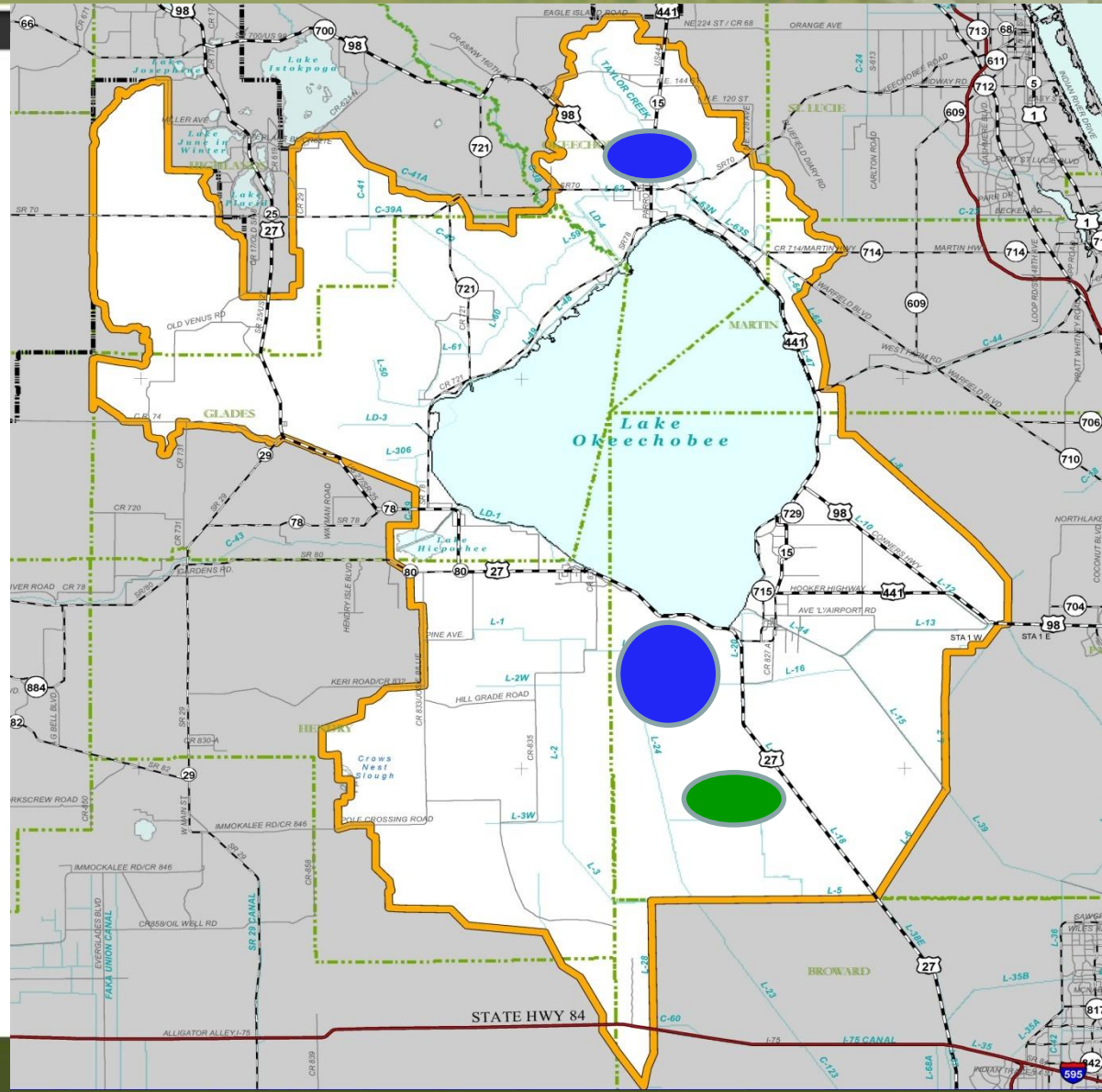
Low

Cost Estimate

Medium

Land/Economics

Medium



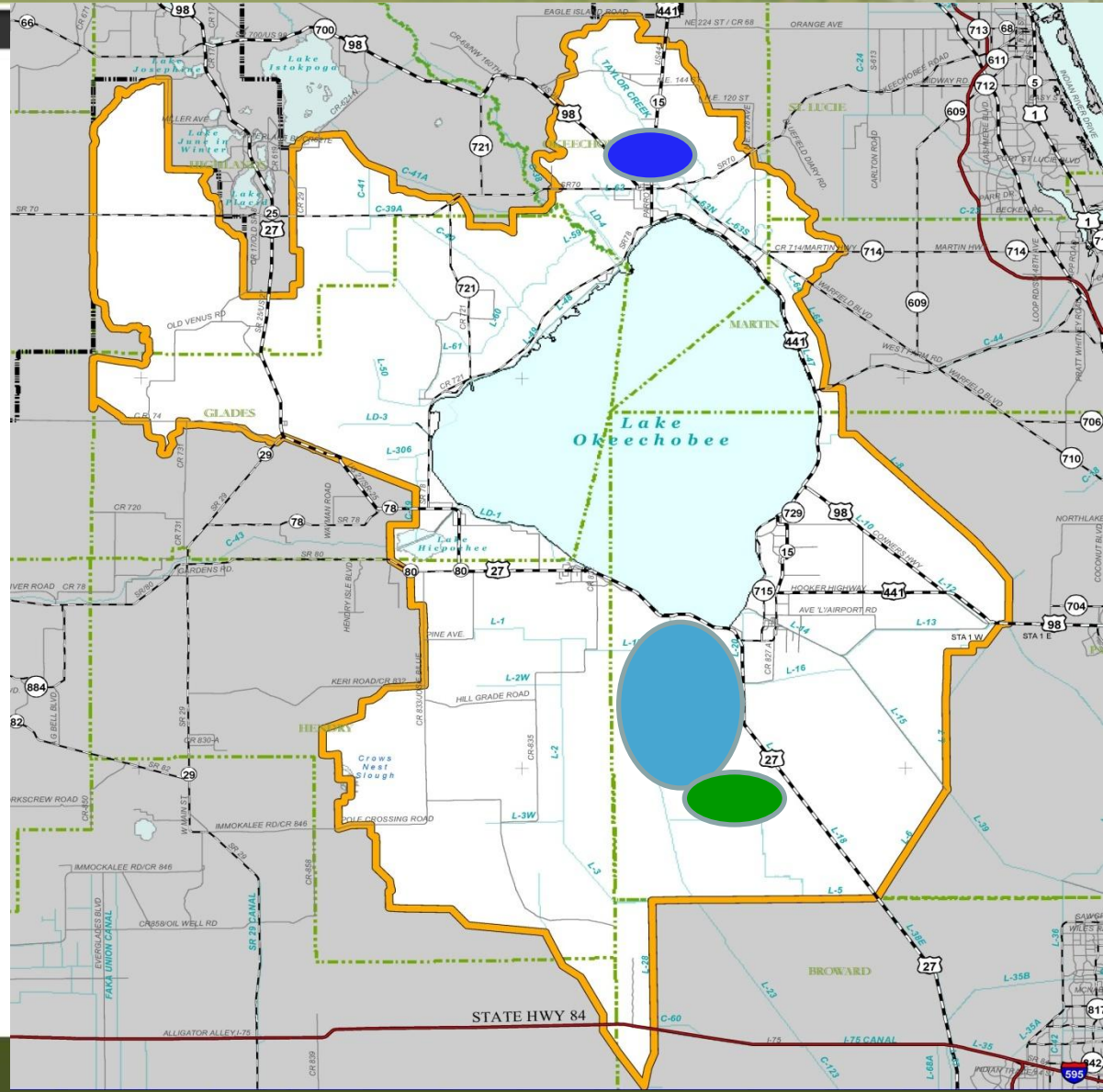
Everglades Restoration

EAA Wetlands

Cost Estimate

Land/Economics

Medium to High



Phase I Comparative Evaluation Summary of Combined Project Features

Shallow Wet Storage With STAs

Everglades Restoration

Low to Medium

EAA Wetlands

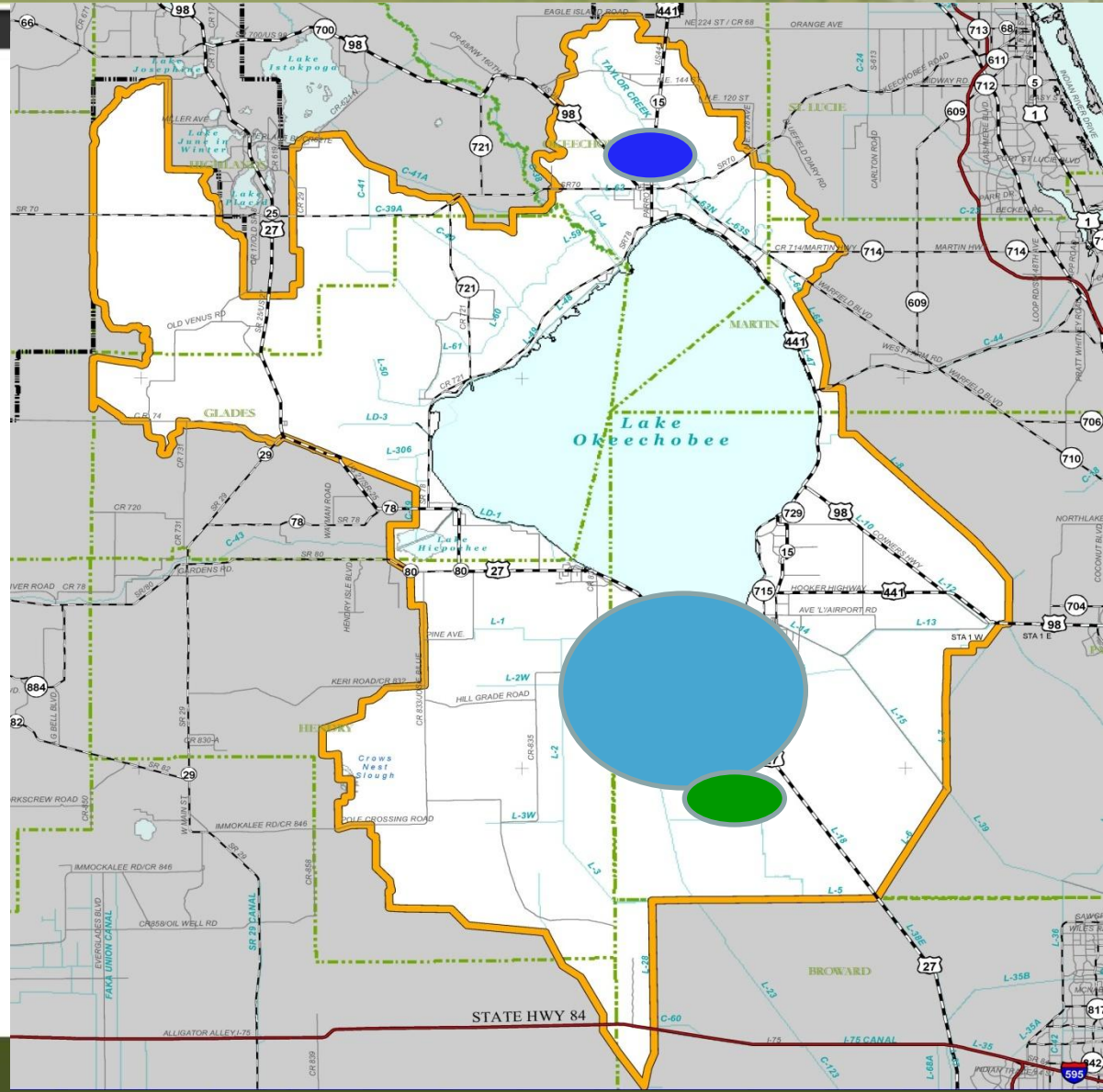
High

Cost Estimate

High

Land/Economics

High



Common Project Elements with Nine Configurations

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- Storage north and south of Lake Okeechobee
- Water quality treatment for additional flows to Everglades
- Features addressing flows/loads in excess of STA-1W and STA-1E treatment capacity
 - ECART canal conveyance improvements
 - Additional STA acreage for L-8/S-5A Basin Runoff
- No deep storage on EAA Talisman A1 site
 - Stormwater treatment area
 - Shallow storage
- Features addressing existing issues in East Caloosahatchee, S-4, and C-139 Basins
 - Lake Hicpochee storage and treatment
 - Disston Island/S-4 storage and treatment
 - C-139 storage and treatment



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Phase II Planning

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Phase II Considerations

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- **Everglades Hydrologic Targets-** Refine revised target (~1.9 million acre-feet) while considering constraints through Target Workshop and more detailed modeling evaluation
- **Constraints and Phasing-** Evaluate constraints with detailed model and develop detailed phasing plan
- **Storage Targets and Feature Types-**
 - **Wet vs Dry Footprints-** Evaluate varying degrees of wet and magnitude of impact with detailed model
 - **Shallow vs. Deep Storage vs. Combination-** Reassess with refined Everglades target and detailed model to determine preferred approach/balance
 - **Total Storage Targets-** Refine storage target range (700,000-1,100,000 acre-ft) based on refined Everglades target and constraints

Phase II Considerations (continued)

RESTORATION PLANNING

- **Lake Okeechobee Performance and Northern Everglades Storage**
 - Lake's Low Stage Performance- identify opportunities to improve Lake's low stages beyond conditions with current Lake Okeechobee regulation schedule (LORS-2008)
 - Reassess Northern Everglades storage needs in consideration of low stage improvements and downstream constraints
- **Water Quality-** Improve performance estimates utilizing dynamic model and potential testing/additional data related performance for various features
- **Features and Combinations-** Identified 5 primary combinations of features, some or all of which can be further evaluated and optimized in Phase II to meet restoration needs/identify opportunities for incorporating additional attributes (e.g., recreation, increased wetland extent)

Phase II Considerations (continued)

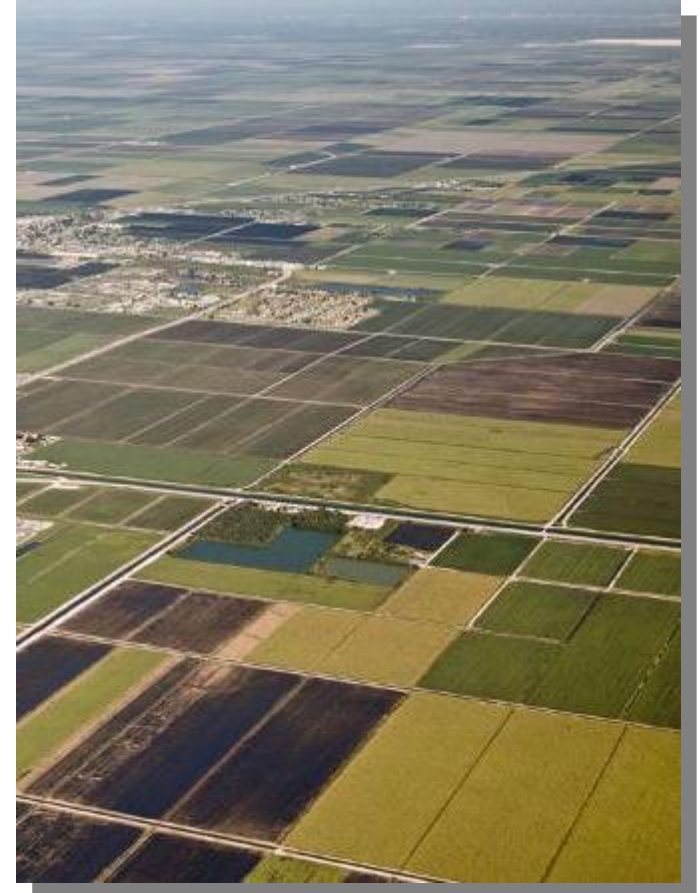
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- **Common Elements-** Identified features common to most restoration proposals, can consider moving these features more quickly into design and construction phases while detailed planning continues
- **Public Planning Process-** Utilized public planning process which has encouraged participation by stakeholders and staff and has improved communication and understanding. A similar process can be utilized in Phase II.
- **Other Phase II Considerations-**
 - Role of ASR
 - Hydraulic limitations
 - Sea level rise
 - Evaluation of economic impacts and values

Phase II Recommended Approach

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- Public Planning Process similar to Phase I
 - Kick-off: Fall 2009
 - Scope: Identify recommended conceptual plans including footprint (options to include scenarios with land swaps and scenarios without)





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Questions?

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Supplemental Information

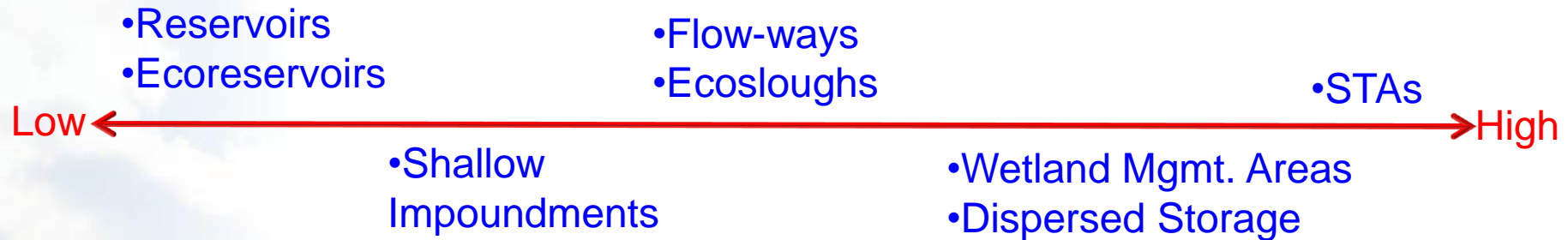
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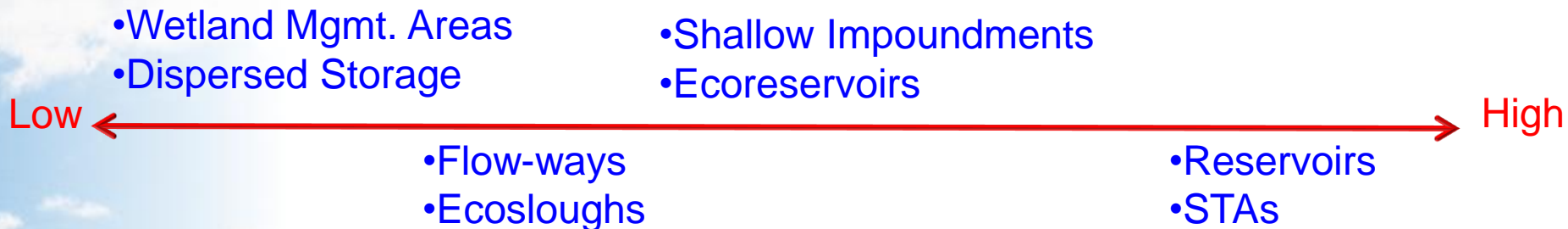
Relative Feature Performance

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Water Quality- Phosphorus Treatment Performance



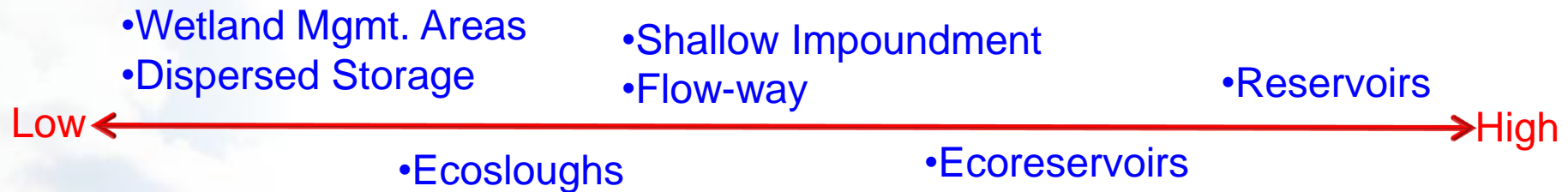
Management Intensity



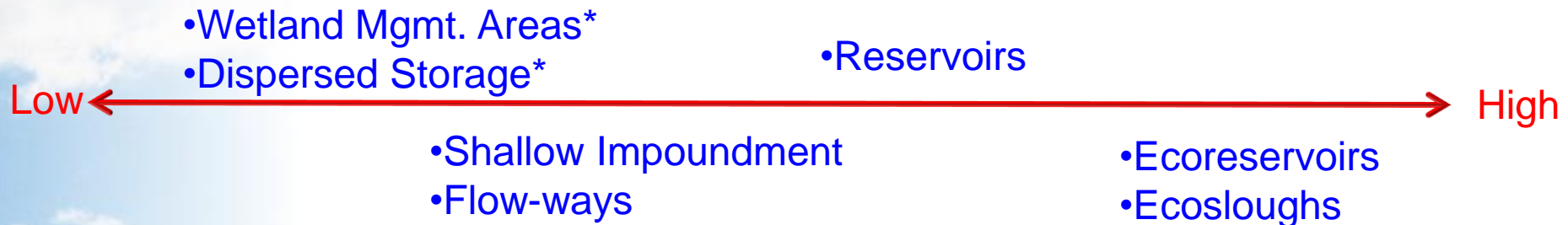
Relative Feature Performance

RESTORATION PLANNING

Storage per Acre



Cost per Acre-ft of Storage



* Costs highly variable, can range from low to higher than reservoir costs